ABSTRACT

A system (300, 500) for scrambling digital
samples (115, 200, 250, 260, 270) of multimedia
data, including audio and video data samples, such

5   that the content of the samples is degraded but
still recognizable, or otherwise provided at a
desired quality level. The samples may be in any
conceivable compressed or uncompressed digital
format, including Pulse Code Modulation (PCM)

10   samples, samples in floating point representation,
samples in companding schemes (e.g., μ-law and A-
law), and other compressed bit streams. The quality
level may be associated with a particular signal to
noise ratio, or quality level that is determined by

15   objective and/or subjective tests, for example. A
number of LSBs can be scrambled in successive
samples in successive frames (FRAME A, FRAME B,
FRAME C). Moreover, the parameters for scrambling
may change from frame to frame. Furthermore, all or

20   part of the scrambling key (310) can be embedded
(340) in the scrambled data and recovered at a
decoder (400, 600) to be used in descrambling.
After descrambling, the scramble key is no longer
recoverable because the scramble key itself is

25   scrambled by the descrambler.